<u>IN THE CLAIMS</u>:

Please CANCEL claims 1-45 without prejudice to or disclaimer of the recited subject matter.

Please ADD new claims 46-53, as follows. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

1-45. (Canceled)

46. (New) An active vibration suppression apparatus comprising:

an actuator fixed to a vibration suppression target;

an inertial load driven relative to the target by said actuator; and

a driving system which drives said actuator based on a first signal corresponding to the vibration, generated or to be generated, of the target, wherein said driving system comprises a compensation unit which performs a compensation for the first signal,

wherein the compensation, separately or as a composite compensation, comprises:

(i) a linear compensation for the first signal to obtain a first compensated signal, and

(ii) a nonlinear compensation for the first compensated signal to obtain a second compensated signal, a rate of a change in the second compensated signal to a change in an absolute value of the first compensated signal becoming less with an increase of the absolute value.

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47. (New) An apparatus according to claim 46, wherein said actuator drives the inertial load in a straight direction.

48. (New) An apparatus according to claim 46, further comprising a vibration detection unit which detects a vibration of the target and outputs a detected signal as the first signal.

49. (New) An apparatus according to claim 46, wherein said compensation unit performs the compensation using a sigmoid function.

50. (New) An apparatus according to claim 46, wherein said driving system uses, as the first signal, one of a driving signal for a stage which is supported by the target and moves relative to the target, and a signal concerning a driving state of the stage.

51. (New) An apparatus according to claim 46, wherein the linear compensation comprises at least one of a proportional compensation, an integral compensation, a differential compensation, a phase-lead compensation, and a phase-lag compensation.

52. (New) An apparatus according to claim 46, wherein said compensation unit performs the nonlinear compensation using one of a monotone increasing function and a monotone decreasing function.

53. (New) A method applied to an active vibration suppression apparatus, the apparatus comprising an actuator fixed to a vibration suppression target, and an inertial load driven relative to the target by the actuator, said method comprising:

performing a compensation for a first signal corresponding to vibration, generated or to be generated, of the target, wherein the compensation, separately or as a composite compensation, comprises:

(i) a linear compensation for the first signal to obtain a first compensated signal; and

(ii) a nonlinear compensation for the first compensated signal to obtain a second compensated signal, a rate of a change in the second compensated signal to a change in an absolute value of the first compensated signal becoming less with an increase of the absolute value; and

driving the actuator based on the second compensated signal obtained in said performing step.